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Mary E. Golota Cantor Colburn LLP 201 W. Big Beaver Road Suite 1101 Troy, MI 48084			EXAMINER NILAND, PATRICK DENNIS	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			10/16/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/595,190

Applicant(s)

ALPERT ET AL.

Examiner

Patrick D. Niland

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2008 and 12 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-15, 17-23 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-15, 17-23, and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/5/08 has been entered.

The amendment of 6/12/09 has been entered. Claims 1-4, 6-15, 17-23, and 29 are pending.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-4, 6-15, 17-23, and 29 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 7019042 Rockrath et al. in view of US Pat. No. 5064871 Sciangola. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of Rockrath encompass the instantly claimed thixotropes including the crystalline morphologies of the instant claims at claim 10 of Rockrath. Rockrath does not disclose catalyzing the urea reaction with the instantly claimed bismuth catalysts. It would have been obvious to one of ordinary skill in the art to catalyze the instantly claimed urea reactions with the instantly claimed bismuth catalysts because Sciangola teaches that the instantly claimed bismuth catalysts are known to catalyze the urea reaction at the abstract, of which "isocyanate reactive compound" includes water and amines per column 2, lines 9-27; column 9, lines 6-12; and the remainder of the document, the catalyzation is expected to give the typical benefits of catalysis such as lowering the activation energy needed to start the reaction and shortening the time of reaction. The instant claims do not recite sufficient reaction conditions, such as temperature, ingredient types, sequence of ingredient addition, catalyst amounts, etc. to not encompass the urea thixotropic compositions of the claims of Rockrath. The presence of the bismuth catalyst is inherent in the obviousness statement regarding bismuth catalysts since it would be impossible to remove all of the bismuth from the product.

Claim 11 of Rockrath encompasses 0.1 to 10% by weight of the urea crystals. Newly amended claim 1 recites "wherein the rheological aid comprises a bismuth compound and the urea derivative (A) in an amount, based on the rheological aid, of more than 10% by weight." It is noted that the patentee's claimed weight percent is based solely on the urea crystals whereas

the newly recited weight percent is the weight of urea plus catalyst. Thus, at just greater than 10 percent (e.g. infinitesimally greater than 10%), the instant claims contain some catalyst and therefore less than or equal to 10 percent of the urea. Thus, the instant claims and the cited prior art overlap at 10% urea and less, e.g. the amount of urea and catalyst minus the unspecified amount of catalyst in the instant claim 1. Claim 27 requires no amounts. The applicant's arguments regarding the purpose of the catalyst in Sciangola are noted. However, Sciangola clearly shows the instantly claimed bismuth catalysts to catalyze the isocyanate/isocyanate reactive group reaction, including the amine/NCO reaction, and this catalysis would have been expected in the reactions of Rockrath. There is no showing of unexpected results commensurate in scope with the instant claims and the cited prior art particularly considering catalyst amounts, specific differences in the various isocyanates and amines used and encompassed, reaction conditions including temperatures, and other material factors which the ordinary skilled artisan understands affect the urea reaction. The applicant's arguments of 1/17/08 have been fully considered. However, the claim language of Rockrath encompasses the instantly claimed combinations of amines and the amounts of the instant claims. There is nothing in the enabling disclosure of Rockrath to define the patented claims in any other way. Thus, it would have been obvious to one of ordinary skill in the art at the time of the instant claims to use the instantly claimed combinations of amines in the thixotrope of Rockrath's claimed invention because they are encompassed by the patented claims and would have been expected to give the disclosed thixotropy and the instantly claimed amount of thixotrope because it is also encompassed by Rockrath's patented claim language and would have been expected to give thixotropy in proportion to the amount of thixotrope used. There is no showing of unexpected results

stemming from the differences between the instant claims and the patented claims of Rockrath in a manner commensurate in scope with the instant claims and the patented claims.

Claim 11 of Rockrath encompasses 0.1 to 10% by weight of the urea crystals. Newly amended claim 1 recites “wherein the rheological aid comprises the urea derivative from the reaction of (a1) and (a2) in an amount, based on the rheological aid, of more than 10% by weight.” and the applicant argues that this excludes the catalyst (a3) that is in (A). At just greater than 10 percent (e.g. infinitesimally greater than 10%), the instant claims are encompassed. Within mathematical precision, “10” of the patentee encompasses 10.1, which rounds off to 10. Practical measuring error assures that one will use at least one molecule more than 10% when attempting to use the upper limit of the claimed range of Rockrath as often as not. Furthermore, one molecule more than 10%, which falls within the scope of the instant claims, is expected to function equivalently to 10% of the instant claims. The closeness of the endpoints of Rockrath’s preferred and claimed range and the lower limit of the instant claims is such that these two points are obvious over each other. See MPEP 2144.05 [R-5] Obviousness of Ranges

“Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of “having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium” as obvious

over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).” The applicant’s arguments in this regard are therefore not persuasive.

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above. This rejection is therefore maintained for the reasons applied to the rejection of paragraph 5 below.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-15, 17-23, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 100 42 152 as translated by US Pat. No. 7019042 Rockrath et al. in view of US Pat. No. 5064871 Sciangola.

The instant claims are directed to the product per se, not the method of making the product. See MPEP 2113 in regard to product by process claims. The instant claims are directed to the compositions per se which appear to substantially encompass the compositions of Rockrath (note the entire disclosure including the claims, particularly claim 10), not the methods of making the compositions. The instant claims do not recite sufficient reaction conditions, such as temperature, ingredient types, sequence of ingredient addition, catalyst amounts, etc. to not encompass the urea thixotropic compositions of Rockrath. Thus, it appears that the compositions of the instant claims overlap those of the patentee. The fact that the crystalline morphology of the ureas of Rockrath's claims are those of the instant claims supports this conclusion. Note claim 10 of Rockrath.

Rockrath does not disclose the instantly claimed bismuth catalysts.

It would have been obvious to one of ordinary skill in the art to catalyze the instantly claimed urea reactions with the instantly claimed bismuth catalysts because Sciangola teaches that the instantly claimed bismuth catalysts are known to catalyze the urea reaction at the abstract, of which "isocyanate reactive compound" includes water and amines per column 2, lines 9-27; column 9, lines 6-12; and the remainder of the document, the catalyzation is expected to give the typical benefits of catalysis such as lowering the activation energy needed to start the reaction and shortening the time of reaction. The instant claims do not recite sufficient reaction conditions, such as temperature, ingredient types, sequence of ingredient addition, catalyst amounts, etc. to not encompass the urea thixotropic compositions of the claims of Rockrath. No unexpected results commensurate in scope with the instant claims and the cited prior art are seen, particularly considering the broad array of reaction conditions not specified by the instant claims. As was stated regarding the amount of urea in the previous rejection, the catalyst would remain therein because it is impractical to impossible to remove it completely.

Claim 11 of Rockrath encompasses 0.1 to 10% by weight of the urea crystals, the upper limit thereof falling within the scope of the instantly claimed amounts of urea derivative of "more than 10% by weight" because the upper values of the upper amount of the prior art and the instantly claimed lower limit are within the scope of each other within the claimed mathematical precision and accuracy and within experimental error as one cannot measure with a single molecule accuracy and 10.01, for example rounds to the "10%" within the accuracy of Rockrath. Furthermore, Rockrath is not limited to only up to 10%. These are preferred amounts which do not teach away from using more urea in the thickener. Column 4, lines 44-47, particularly "vary widely" and guided by the intended rheological characteristics" is taken as encompassing values

that vary widely from the preferred amounts and include the instantly claimed amounts of urea derivatives. It is also seen from the cited prior art that this amount is not resultant from the catalyst used. Thus, it is not seen that the amount is an unexpected result stemming from the instantly claimed catalyst. Column 4, lines 39-53 shows the claimed range to be preferred with the broad claim 1 and disclosure of Rockrath encompassing more than the preferred range of urea crystals. Newly amended claim 1 recites “wherein the rheological aid comprises the urea derivative from the reaction of (a1) and (a2) in an amount, based on the rheological aid, of more than 10% by weight.” and the applicant argues that this excludes the catalyst (a3) that is in (A). At just greater than 10 percent (e.g. infinitesimally greater than 10%), the instant claims are encompassed. Within mathematical precision, “10” of the patentee encompasses 10.1, which rounds off to 10. Practical measuring error assures that one will use at least one molecule more than 10% when attempting to use the upper limit of the preferred range of Rockrath as often as not. Furthermore, one molecule more than 10%, which falls within the scope of the instant claims, is expected to function equivalently to 10% of the instant claims. The closeness of the endpoints of Rockrath’s preferred and claimed range and the lower limit of the instant claims is such that these two points are obvious over each other. See MPEP 2144.05 [R-5] Obviousness of Ranges “Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of “having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium” as obvious

over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).”

Thus, the amount of urea is not seen as distinguishing the instant claims from the urea thickener compositions of the instant rejection.

The applicant’s arguments regarding the purpose of the catalyst in Sciangola are noted. However, Sciangola clearly shows the instantly claimed bismuth catalysts to catalyze the isocyanate/isocyanate reactive group reaction, including the amine/NCO reaction, and this catalysis would have been expected in the reactions of Rockrath. This is the reason to expect success in using the catalysts of Sciangola in Rockrath’s urea reaction. There is no showing of unexpected results commensurate in scope with the instant claims and the cited prior art particularly considering catalyst amounts, specific differences in the various isocyanates and amines used and encompassed, reaction conditions including temperatures, and other material factors which the ordinary skilled artisan understands affect the urea reaction. The applicant’s arguments have been fully considered. However, the claim language and disclosure of Rockrath encompasses the instantly claimed combinations of amines and the amounts of the instant claims. There is nothing in the enabling disclosure of Rockrath to define the patented claims in any other way. Thus, it would have been obvious to one of ordinary skill in the art at the time of the instant claims to use the instantly claimed combinations of amines in the thixotrope of Rockrath’s disclosed invention because they are encompassed by the patentee’s disclosure and would have been expected to give the disclosed thixotropy and the instantly claimed amount of thixotrope because it is also encompassed by Rockrath’s disclosure and would have been expected to give thixotropy in proportion to the amount of thixotrope used. There is no showing of unexpected

results stemming from the differences between the instant claims and the patentee's disclosed inventions in a manner commensurate in scope with the instant claims and the prior art cited.

It would have been obvious to one of ordinary skill in the art to catalyze the instantly claimed urea reactions with the instantly claimed amounts of the instantly claimed bismuth catalysts because such amounts are encompassed by the broad disclosure of Sciangola, particularly at column 3, lines 58-61 and more particularly at column 3, lines 16-68; column 4, lines 1-68; column 5, lines 1-68; and column 6, lines 1-24 with the higher amounts of lower molecular weight bismuth catalysts disclosed therein and the amounts of polyisocyanate chosen with regard to molar amounts and molecular weights that give the requirements of column 6, lines 4-16 and the choice of molecular weight and molar amounts of the NCO reactive components thereof being chosen such that the instantly claimed ratio of NCO:Bi of the instant claims 14 and 29 is encompassed, the instantly claimed NCO:Bi ratios would have been expected to catalyze the urea formation of Rockrath per the disclosure of Sciangola and per the definition of "catalyst", which is not consumed during the reaction. No showing of unexpected results is seen stemming from the instantly claimed NCO:Bi ratio in a manner commensurate in scope with the instant claims and the cited prior art, particularly considering the broad array of reaction conditions not claimed that materially affect the product produced. These factors are mentioned above, though the list is not complete as would be appreciated by the ordinary skilled artisan.

The above rejection meets the requirements of *Graham v. Deere* and MPEP 2141 and 2143, particularly per the "KSR" decision noted therein. The expectation of success stems from the fact that the bismuth catalyst is shown to catalyze the reaction of Rockrath in Sciangola. The

applicant's arguments regarding the unpredictability of catalyst action are not persuasive. The same catalytic activity obtained in Sciangola is expected in the reaction of Rockrath. There is no probative showing that any unexpected result occurs due to the use of the instantly claimed bismuth catalysts that is commensurate in scope with the instant claims, as noted above. No unpredictability of the bismuth catalyst discussed above has been demonstrated in a probative manner. The prima facie expectation is that the bismuth catalyst will function as required because it is known to catalyze the NCO/active hydrogen reaction as shown by Sciangola. The instant claims recite "comprising" and therefore include the zirconium catalysts of Sciangola also, though these were not necessarily required by the above rejection as Sciangola is taken to suggest that the bismuth catalyst catalyzes the NCO/active hydrogen reaction by itself. Potlife is not a problem in Rockrath due to the monofunctional compounds and lack of polyfunctional compounds, as would be appreciated by the ordinary skilled artisan. Again, no unexpected result stems from the use of the instantly claimed bismuth compound and it is expected to catalyze the NCO/active hydrogen reaction of Rockrath just as it catalyzes the NCO/active hydrogen reaction of Sciangola. The above meets the requirements of *In re Rinehart* and *Graham v. Deere*, argued by the applicant, as well as the "KSR" decision noted above. The argument of "curing catalyst" does not change the fact that the bismuth catalysts of the cited prior art are known to catalyze the NCO/active hydrogen reaction and would have been expected to catalyze that same reaction in Rockrath. The use of known catalysts to catalyze analogous reactions to those that they are known to catalyze is clear evidence of the prima facie case of obviousness made above.

The argument that the instantly claimed catalysts give improved solubility, in a rheological agent such that a greater concentration of said urea crystal can be present in the

rheological agent as compared to the prior art, to the urea crystals is not supported by probative evidence and is rebutted by the use of the instantly claimed amount of urea crystals by Rockrath, as stated above. This argument is not commensurate in scope with the claims and the cited prior art. Nor is the amount of urea crystals in the rheology aid shown to be a function of the bismuth catalysts claimed. Common knowledge and common sense dictate that if the bismuth catalyst catalyzes the NCO/active hydrogen reactions of Sciangola then it will also catalyze that of Rockrath. The applicant's arguments regarding DyStar v. Patrick Co. are therefore not persuasive. There is no probative evidence cited that the NCO/active hydrogen reactions of Sciangola differ materially from those of the instant claims and Rockrath. The applicant's arguments regarding NCO/NCO active group reactions varying widely and producing a wide array of products is not commensurate in scope with the instant claims and the cited prior art, both of which encompass the instantly claimed NCO/NH reaction to give urea groups. The potlife argument is addressed above.

The applicant's arguments regarding claims 1 and 29 and the argued increased concentration of urea crystals in the rheology agents therein are addressed above.

The prior art cited above, evaluated as a whole, shows that it is in fact *prima facie* obvious to use the bismuth catalyst to catalyze the reaction of Rockrath for the reasons stated above. The applicant's arguments to the contrary ignore the state of the art and the ordinary skilled artisan's considerations in choosing catalysts. Furthermore, no unexpected results have been shown to stem from the use of the instantly claimed catalysts in a manner commensurate in scope with the instant claims and the cited prior art, particularly considering the vast array of reaction conditions encompassed by the cited prior art and the instant claims.

The above does not "ignore" the instantly claimed recitation of "more than 10%" clearly. The above arguments in regard to the instantly claimed amounts of urea derivative are not overcome by the applicant's arguments for the reasons stated above. Rockrath is not limited to its examples. Arguments regarding the amounts of urea therein are not persuasive because they do not consider the full teachings of Rockrath in this regard, as noted above. The applicant's argument regarding their working examples' amounts of urea derivative and those of Rockrath are not commensurate in scope with the full disclosure of Rockrath, as noted above, and the full scope of the instant claims. No unexpected results are seen, as stated above.

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above and because of the teachings of the cited prior art. This rejection is therefore maintained.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

//Patrick D Niland/
Primary Examiner
Art Unit 1796